AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims, in which claims 2 and 17 have been previously canceled without prejudice or disclaimer, claim 33 is withdrawn from consideration, claims 1, 16, 31 and 32 are currently amended, and no claims are newly presented.

1. (Currently Amended) A system for efficient storage of data for use by an application, comprising:

a set top box, including,

a physical memory,

a bulk storage device, and

a memory management unit (MMU) ~~coupled~~ provided as an interface between said application and said physical memory and said bulk storage device,

wherein said physical memory and said bulk storage device are configured to store said data, and

said MMU is configured to translate a virtual address provided by said application to a physical address used by one of said physical memory and said bulk storage device, and to page pages of said data stored in said physical memory to and from said bulk storage device.

2. (Canceled)

3. (Previously Presented) The system of claim 1, wherein said MMU is configured to page said pages using an algorithm.

4. (Original) The system of claim 3, wherein said algorithm is based on a least-recently-used page basis.

5. (Previously Presented) The system of claim 3, wherein said algorithm is based on a First In First Out (FIFO) page basis.

6. (Previously Presented) The system of claim 3, wherein said algorithm is based on a Last In First Out (LIFO) page basis.

7. (Original) The system of claim 3, wherein said algorithm is based on a best fit in said physical memory basis.

8. (Original) The system of claim 1, wherein said data comprises program guide data for said application comprising a program guide for a plurality of program sources.

9. (Original) The system of claim 1, wherein said physical memory comprises a random access memory (RAM).

10. (Original) The system of claim 1, wherein said bulk storage device comprises a hard disk.

11. (Original) The system of claim 8, further comprising a communications channel configured to transmit said program guide data to said set top box.

12. (Original) The system of claim 11, wherein said communications channel is configured as one of a satellite communications channel, a cable communications channel, a digital video broadcasting (DVB) communications channel and a terrestrial broadcast communications channel.

13. (Original) The system of claim 8, wherein said program guide is configured to display said program guide data on a device coupled to said set top box in a tabular form including program times, program channels and program identifications.

14. (Original) The system of claim 13, wherein said program identifications include information regarding at least one of actors, ratings, description of programs, cost for pay per view, a frequency of said communications channel, a video channel within said frequency, and an audio channel within said frequency.

15. (Original) The system of claim 1, wherein said data comprises one of data structures, executable code, displayable user interface data, and Web page data for said application comprising a database application, an executable program application, a user interface program application, and a Web browser program application.

16. (Currently Amended) A method for efficient storage of data for use by an application, comprising:

~~coupling~~ providing a memory management unit (MMU) as an interface between an application and a physical memory and a bulk storage device included in a set top box;

configuring said physical memory and said bulk storage device to store said data; and

configuring said MMU to translate a virtual address provided by said application to a physical address used by one of said physical memory and said bulk storage device, and to page pages of said data stored in said physical memory to and from said bulk storage device.

17. (Canceled)

18. (Original) The method of claim 16, further comprising configuring said MMU to page said pages using an algorithm.

19. (Original) The method of claim 18, further comprising configuring said algorithm based on a least-recently-used page basis.

20. (Previously Presented) The method of claim 18, further comprising configuring said algorithm based on a First In First Out (FIFO) page basis.

21. (Previously Presented) The method of claim 18, further comprising configuring said algorithm based on a Last In First Out (LIFO) page basis.

22. (Original) The method of claim 18, further comprising configuring said algorithm based on a best fit in said physical memory basis.

23. (Original) The method of claim 16, wherein said data comprises program guide data for said application comprising a program guide for a plurality of program sources.

24. (Original) The method of claim 16, wherein said physical memory comprises a random access memory (RAM).

25. (Original) The method of claim 16, wherein said bulk storage device comprises a hard disk.

26. (Original) The method of claim 23, further comprising a communications channel configured to transmit said program guide data to said set top box.

27. (Original) The method of claim 26, wherein said communications channel is configured as one of a satellite communications channel, a cable communications channel, a digital video broadcasting (DVB) communications channel and a terrestrial broadcast communications channel.

28. (Original) The method of claim 23, wherein said program guide is configured to display said program guide data on a device coupled to said set top box in a tabular form including program times, program channels and program identifications.

29. (Original) The method of claim 28, wherein said program identifications include information regarding at least one of actors, ratings, description of programs, cost for pay per view, a frequency of said communications channel, a video channel within said frequency, and an audio channel within said frequency.

30. (Original) The method of claim 16, wherein said data comprises one of data structures, executable code, displayable user interface data, and Web page data for said application comprising a database application, an executable program application, a user interface program application, and a Web browser program application.

31. (Currently Amended) A computer-readable ~~medium~~ device carrying one or more sequences of one or more instructions for efficient storage of data for use by an application, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps recited in any one of claims 16-30.

32. (Currently Amended) A system for efficient storage of data for use by an application, comprising:

a set top box means, including,

physical memory means,

bulk storage means, and

memory management means ~~coupled~~ provided as an interface between said application and said physical memory means and said bulk storage means,

wherein said physical memory means and said bulk storage means store said data, and

said memory management means translates a virtual address provided by said application to a physical address used by one of said physical memory means and said bulk storage means, and pages ~~pages~~ of said data stored in said physical memory to and from said bulk storage device.

33. (Withdrawn) A method for storing a program guide, the method comprising:

accessing a virtual memory page associated with the program guide;

obtaining a virtual address corresponding to the virtual memory page;

translating the virtual address to a physical address;

determining whether the physical address is mapped to a physical page in a volatile memory;

generating a page fault if no physical address is mapped to the physical page;

determining whether to replace the physical page using a least-recently-used scheme;

determining whether the physical page to be replaced has been updated; and

if no update is determined, freeing a page within the volatile memory and mapping another virtual memory page to the corresponding freed page within the volatile memory, wherein a corresponding page in a hard disk is stored in location of the freed page.